Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

# Unit 3 Test Study Guide

*Turn this completed study guide (with all your work shown) in with your test, and you will earn a 5% bonus.*

## Unit 3 Standards

**MM2G3. Students will understand the properties of circles.**

a. Understand and use properties of chords, tangents, and secants as an application of triangle similarity.

b. Understand and use properties of central, inscribed, and related angles.

c. Use the properties of circles to solve problems involving the length of an arc and the area of a sector.

d. Justify measurements and relationships in circles using geometric and algebraic properties.

**MM2G4. Students will find and compare the measures of spheres.**

a. Use and apply surface area and volume of a sphere.

b. Determine the effect on surface area and volume of changing the radius or diameter of a sphere.

## Vocabulary

major arc

minor arc

semicircle

secant line

tangent line

central angle

inscribed angle

chord

intercepted arc

sector

circumscribed

## Formulas

*Memorize these, as you will not be able to bring notes into the test.*

Circumference of a circle

Area of a circle & area of a sector

Surface area of a sphere

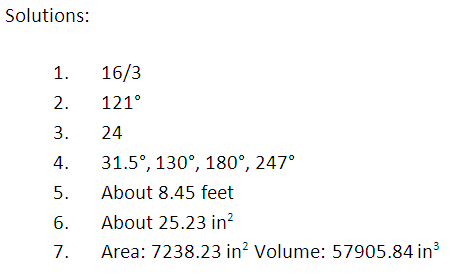
Volume of a sphere

## Additional Resources

Gizmos at <http://www.explorelearning.com>:

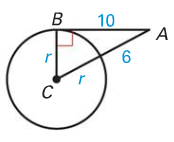
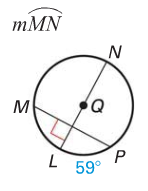
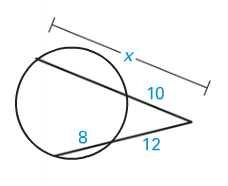
Chords & Arcs (<http://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=175>)

Inscribing Angles (<http://www.explorelearning.com/index.cfm?method=cResource.dspView&ResourceID=175>)

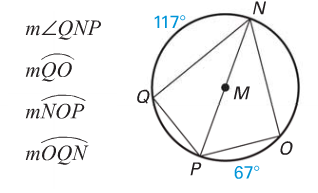


# Problems

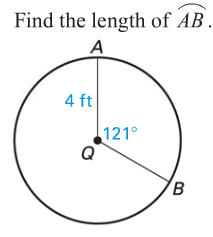
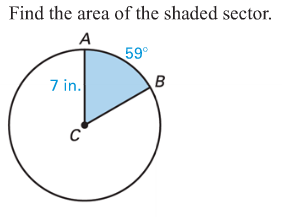
## MM2G3a,d

1. 
2. 
3. 

## MM2G3b,d

1. 

## MM2G3c,d

1. 
2. 

## MM2G4a

1. Compute the surface area and volume of a sphere with a radius of 24 inches.